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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,646	03/09/2001	Tetsuo Saeki	0717-0462P	3943

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EXAMINER

PATEL, GAUTAM

ART UNIT PAPER NUMBER

2655

DATE MAILED: 05/11/2005

15

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/801,646

Applicant(s)

SAEKI, TETSUO

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-8 are pending for the examination.

### RCE STATUS

2. The request filed on 12-22-03 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

### *Claim Rejections - 35 U.S.C. § 103*

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Koki, JPO publication 09-312033 (hereafter Koki) [**Applicants admitted prior art**] in view of Knight et al., US. patent 6,243,350 (hereafter Knight).

NOTE: Since specification already summarizes the Koki patent in pages 1-7, these pages are used to describe the limitations for the convenience of the Applicants. However for newly presented limitations actual paragraphs from application itself are used for more through treatment of the limitations.

As to claim 1, Koki discloses the invention as claimed [see Figs. 5-7], including an optical pickup, which has a stem [base], a light source, a light detector, and a light separating device comprising:

a base [fig. 5, unit 500b] [pg. 1, line 12 to pg. 2, line 1];

a light source [fig. 5, unit 101] provided on the stem [pg. 1, line 12 to pg. 2, line 1];

a light detector [fig. 5, unit 106] provided on the base for detecting light emitted by the light source which is reflected by an optical recording medium [pg. 1, line 12 to pg. 2, line 1]; and

a light separating device [fig. 5, unit 105] , divided into at least a first area and a second area, for separating the light incident on each of the first area and the second area into a plurality of light components and directing each of the light components in a prescribed direction [pg. 2-4],

wherein the light detector includes a light receiver, divided into a first light receiving region [fig. 7, 106a] and a second light receiving region [fig. 7, 106b], for receiving the light components directed by the first area of the light separating device, the first light receiving region and the second light receiving region are located so that a first direction is substantially perpendicular to a second direction, where the first direction is a direction of a phantom straight line connecting a light emitting point of the light source and a focal point on the light detector of the light transmitted through the light separating device, and the second direction is a direction of a dividing line for dividing the light receiver into the first light receiving region and the second light receiving region [pg. 2-4];

the light separating device being divided into at least the first area [fig. 6, right area "H"] and the second area [fig. 6, area "G"], wherein the area have different grating pitches, by a dividing line [see fig. 6, middle line] which is substantially perpendicular to a tracking direction of the optical recording medium, and the light incident on the area being directed to different light receiving regions of the light detector [see Original Application paragraph 19-20 and 22 and corresponding figures 2 and 3 in the original application].

Koki discloses all of the above elements including a base [base] for putting all components next to each other. Koki does not specifically discloses type of the base material or related characteristics of that material i.e. temp coefficient of expansion and/or contraction of the base or other mounted components.

However, it is well known in the art that all system components are susceptible to temperature changes and there are two types of thermal compensation schemes, such as active and passive. Both are well known in the art.

Also Knight clearly discloses:

a material of the base and a wavelength of the light from the light source are selected so that a distance of movement of the focal point on the light detector in a direction perpendicular to the second direction is within a prescribed tolerance limit, the movement being caused by a change in the wavelength of the light emitted by the light source and expansion or contraction of the base, which are both caused by a temperature change of the optical pickup apparatus [col. 22, line 54 to col. 23, line 33 and fig. 20A and 20B].

Both Koki and Knight are interested in improving the quality of signals in an optical disk device. Both Koki and Knight show light source objective lens, motor and plural related optical elements.

One of ordinary skill in the art at the time of invention would have realized that the system components of Koki system would have been sensitive to temperature and even though Koki has an active temperature compensation scheme it would be advantageous to provide an extra passive compensation scheme or replace active scheme with passive scheme to improve the quality of signals and reduce some components.

Therefore, it would have been obvious to have used a passive thermal compensation scheme in the system of Koki as taught by Knight because one would be motivated to reduce thermal noise and related errors and provide better signal controls and improve quality of the signals [col. 22, line 32-53; Knight].

4. As to claim 2, Koki discloses:

a base [fig. 5, unit 500b] [pg. 1, line 12 to pg. 2, line 1];

a light source [fig. 5, unit 101] provided on the base [pg. 1, line 12 to pg. 2, line 1];

a light detector [fig. 5, unit 106] provided on the base for detecting light emitted by the light source which is reflected by an optical recording medium [pg. 1, line 12 to pg. 2, line 1]; and

a light separating device [fig. 5, unit 105], divided into at least a first area and a second area, for separating the light incident on each of the first area and the second area into a plurality of light components and directing each of the light components in a prescribed direction [pg. 2-4],

wherein the light detector includes a light receiver, divided into a first light receiving region [fig. 7, 106a] and a second light receiving region [fig. 7, 106b], for receiving the light components directed by the first area of the light separating device,

the first light receiving region and the second light receiving region are located so that a second direction is inclined with respect to a direction perpendicular to a first direction [pages 5-6 and page 7, para. 2], where the first direction is a direction of a phantom straight line connecting a light emitting point of the light source and a focal point on the light detector of the light transmitted through the light separating device, and the second direction is a direction of a dividing line for dividing the light receiver into the first light receiving region and the second light receiving region [pg. 2-4];

Koki discloses all of the above elements including a base [base] for putting all components next to each other. Koki does not specifically disclose type of the base material or related characteristics of that material i.e. temp coefficient of expansion and/or contraction of the base or other mounted components.

However, it is well known in the art that all system components are susceptible to temperature changes and there are two types of thermal compensation schemes, such as active and passive. Both are well known in the art. Also Knight clearly discloses:

a material of the base and a wavelength of the light from the light source are selected so that a distance of movement of the focal point on the light detector in a direction perpendicular to the second direction is within a prescribed tolerance limit, the movement being caused by a change in the wavelength of the light emitted by the light source and expansion or contraction of the base, which are both caused by a temperature change of the optical pickup apparatus [col. 22, line 54 to col. 23, line 33]

and fig. 20A and 20B]. Both Koki and Knight are interested in improving the quality of signals in an optical disk device. Both Koki and Knight show light source objective lens, motor and plural related optical elements.

One of ordinary skill in the art at the time of invention would have realized that the system components of Koki system would have been sensitive to temperature and even though Koki has an active temperature compensation scheme it would be advantageous to provide an extra passive compensation scheme or replace active scheme with passive scheme to improve the quality of signals and reduce some components. Therefore, it would have been obvious to have used a passive thermal compensation scheme in the system of Koki as taught by Knight because one would be motivated to reduce thermal noise and related errors and provide better signal controls and improve quality of the signals [col. 22, line 32-53; Knight].

5. As to claim 3, Koki discloses:

a beam splitter [fig. 5, unit 102] for separating a part of the light reflected by the optical recording medium and directing the separated part to the light detector [pg. 1, line 12 to pg. 2, line 1],

Combination of Koki & Knight discloses all of the above elements including a base plate [base], lens mount base and lens cells and that compensation takes into account change of the wavelength [col. 22, lines 5467; Knight]. Combination of Koki & Knight does not specifically disclose that the beam splitter is also part of the thermal compensation scheme when wavelength changes to the extent claimed.

However, it is well known in the art that all modern system are placing more and more components on the same base or are integrating them as close as possible for space saving. It would be evident to one of ordinary skill in the art that these components will also be susceptible to temperature changes and some form of temperature compensation will be necessary for them.

Therefore, it would have been obvious to have used a passive thermal compensation scheme on the beam splitter which is located on the same base in the system of Koki because one would be motivated to reduce thermal noise and related

errors and provide better signal controls and improve quality of the signals for the beam splitter in wake of changes in the wavelength also.

6. As to claim 4, it is rejected for the similar reasons set forth in the rejection of claim 3, supra.

7. As to claim 5, Koki discloses:  
the light separating device is divided into at least the first area and the second area by a dividing line which is substantially perpendicular to a tracking direction of the optical recording medium [pg. 2-4].

8. As to claim 6, it is rejected for the similar reasons set forth in the rejection of claim 5, supra.

9. As to claim 7, Koki discloses:  
the light receiver is divided into at least the first light receiving region and the second light receiving region by the dividing line which is substantially parallel to a dividing line for dividing the light separating device into at least the first area and the second area [pg. 2-4].

10. As to claim 8, it is rejected for the similar reasons set forth in the rejection of claim 5, supra.

Koki and Knight were cited as prior art references in paper no. 6, mailed 5-30-03.

11. Applicant's arguments filed on 8-3-03 ( Paper # 8) have been fully considered but they are not deemed to be persuasive for the following reasons.

12. In the REMARKS, the Applicant argues as follows:



A) That: "The examiner indicated that, upon introducing this language into the independent claims 1 and 2, he will consider these features because these features are found in the prior art". [page 10, para. 2; REMARKS].

It seems that some misunderstanding has happened. Close look at the interview summary indicates that Examiner simply has said that he will examine these new limitations to see if they are covered by the same art or by some other art. The examiner has never said that this art does not cover these limitations [see interview summary dated 12/3/03 paper no. 13].

B) That: "To establish *prima facie* obviousness, all claim limitations must be taught or suggested by the prior art ..." [page 10-11, para. 4 & 1; REMARKS].

FIRST : These limitations and reason for combination [see col. 22, lines 32-53] are very clearly taught by Knight.

SECOND: It should also be pointed out that  
The test of the obviousness is:

"whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention,". As shown in *In re Gorman*, 933 F. 2d at 986, 18 USPQ2d at 1888.

Subject matter is unpatentable under section 103 if it "would have been obvious to a person having ordinary skill in the art." While there must be some teaching, reason, suggestion, or motivation to combine existing elements to produce the claimed device, **it is not necessary that the cited references or prior art specifically suggest making the combination.**" As shown in *In re Nilssen*, 851 F. 2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988).

Such suggestion or motivation to combine prior art teachings can derive solely from the existence of a teaching, which **one of ordinary skill in the art would be presumed to know, and the use of that teaching to solve the same [or] similar problem which it addresses.**" As shown in *In re Wood*, 599 F. 2d 1032, 1037, 202 USPQ 171, 174 (CCPA 1979).

***"In sum, it is off the mark for litigants to argue, as many do, that an invention cannot be held to have been obvious unless a suggestion to combine prior art teachings is found in a specific reference."*** As shown in *In re Oetiker*, 24 USPQ2d 1443 (CAFC 1992).

Accordingly, Koki or Knight is not required to disclose or specifically suggest particular elements. Instead the measure is what the teachings of Koki or Knight would suggest to one of ordinary skill in the art, not what Koki or Knight specifically suggests.

C) That: "Additionally, claim 2 recites that "the light separating device is divided into at least first area and the second area ..." [page 13, para. 3; REMARKS].

See new rejection above.

#### **Contact Information**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is 703-872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Ometz can be reached on (571) 272-7593.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.



Gautam R. Patel  
Primary Examiner  
Group Art Unit 2655

**GAUTAM R. PATEL  
PRIMARY EXAMINER**

May 9, 2005